US Army Corps
of Engineers
HUNTSVILLE DIVISION

FINAL

Defense Environmental Restoration Program
for
Formerly Used Defense Sites

Ordnance and Explosive Waste
Chemical Warfare Materials

ARCHIVES SEARCH REPORT FINDINGS

CHOPAWAMSIC TROOP TRAINING SITE

Prince William County, Virginia

Project Number C03VA019402

OCTOBER 1996

~~MARCH 1995~~

Prepared by
US ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

ORDNANCE AND EXPLOSIVE WASTE
CHEMICAL WARFARE MATERIALS
ARCHIVES SEARCH REPORT
for the former
CHOPAWAMSIC TROOP TRAINING SITE
Prince William County, Virginia
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1.0 Introduction

1.1 Authority

In 1986, Congress established the Defense Environmental Restoration Program at 10 U.S.C. 2701 et.seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the Secretary."

In March, 1990, the EPA issued a revised National Contingency Plan. Under 40 C.F.R. 300.120, EPA designated DOD to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD.

Since the beginning of this program, the U.S. Army Corps of Engineers has been the agency responsible for environmental restoration at Formerly-Used Defense Sites (FUDS). Since 1990, the U.S. Army Engineering and Support Center, Huntsville, has been the Mandatory Center of Expertise and Design Center for Ordnance and Explosives.

2.0 Previous Site Investigations

2.1 Findings and Determination of Eligibility

Under the Defense Environmental Restoration Program (DERP), the Norfolk District prepared a Findings and Determination of Eligibility (FDE), for the subject Chopwamsic Troop Training Site. The FDE indicates that the site, consisting of 11,011.23 acres, was acquired by the Army in 1942 by use permit and condemnation. The entire site was placed in the custody of the National Park Service in 1948. The report determined that the site was eligible for the Defense Environmental Restoration Program for Formerly Used Defense Sites.

Completion of the Risk Assessment Code (RAC) Procedures form resulted in a RAC of 3 for the site. However, the Norfolk District presented a justification to reduce their proposed OEW project to a RAC of 4. A copy of the above listed FDEs are included at Appendix C.

2.2 *Prince William Forest Park, An Administrative History*

This document, written in 1986 by Susan Cary Strickland of the History Division, National Park Service, Department of the Interior, Washington, D.C., provides a detailed account of the Park's development. Included is information on the military occupation of the Park, cooperation with the OSS, site selection, early development and growth. The major emphasis is on the political impacts of the original development, and government land acquisition, funding, community relations, and management are detailed.

3.0 Site and Site Area Description

3.1 Location

The former Chopawamsic Troop Training Site is located approximately 35 miles south of Washington D.C., in Prince William County, Virginia. Now referred to as Prince William Forest Park, the site is roughly bounded by Route 619 on the south and west, Route 234 to the north, and Interstate 95 to the east.

3.2 Past Uses

Prior to U.S. Government acquisition, the land was used for agricultural and mining operations. The Army utilized the site for the training counter intelligence agents for the OSS. Improvements by the Army included personnel and maintenance support facilities, several ranges, and two magazines.

3.3 Current Uses

The site currently constitutes the major portion of the Prince William Forest Park which serves as picnic and camping grounds as well as a national forest reserve.

3.4 Demographics of the Area

3.4.1 Center of Activity

Chopawamsic Training Annex is located in Prince William County, Virginia. This community has numerous centers of activity such as the Center for the Arts, Historic Prince William, Inc., Manassas Art Guild, and the Prince William Symphony Orchestra, and various parks located throughout the community. Information comes from both phone conversations and Prince William County demographic fact sheet.

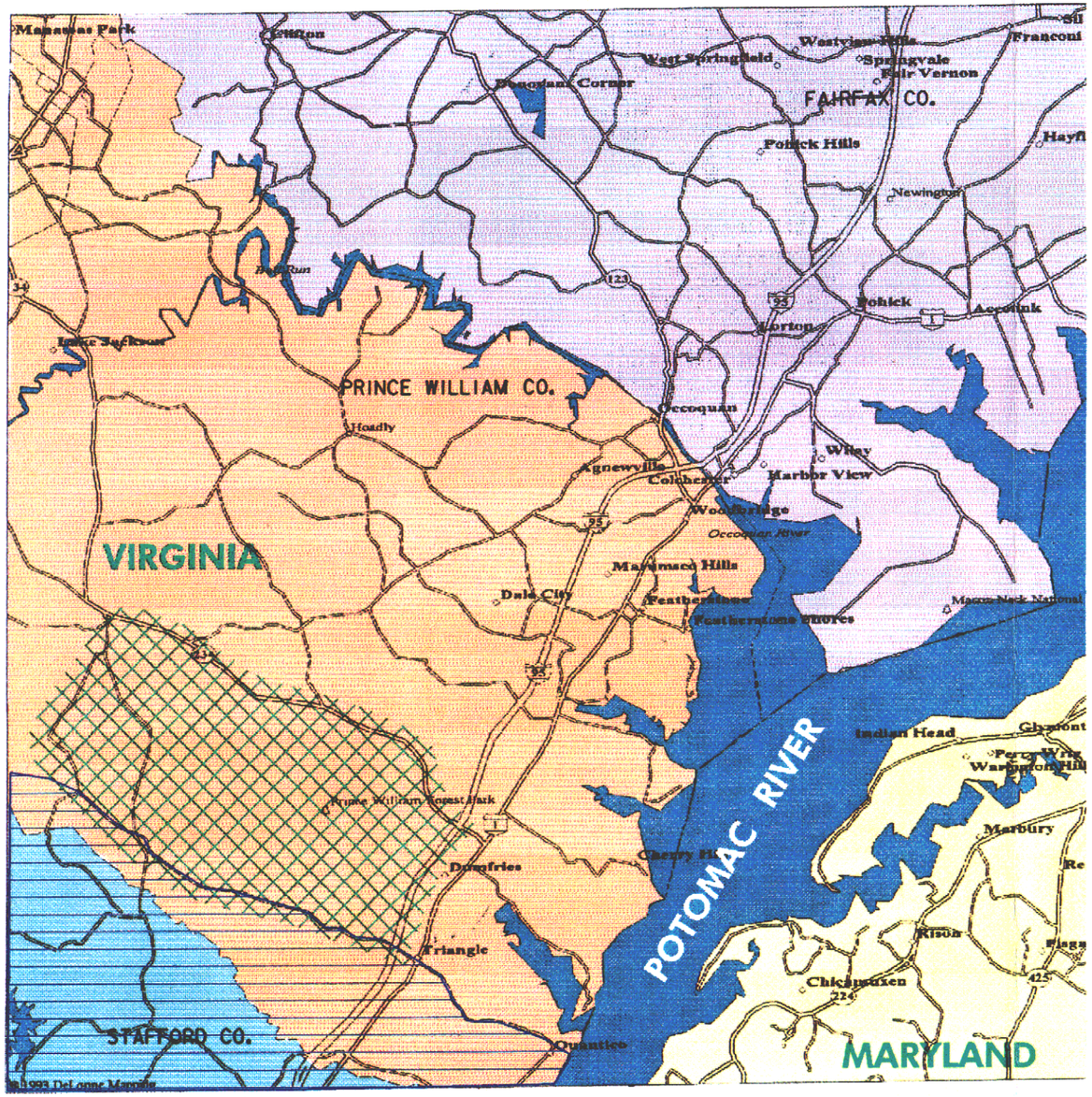
3.4.2 Population Density

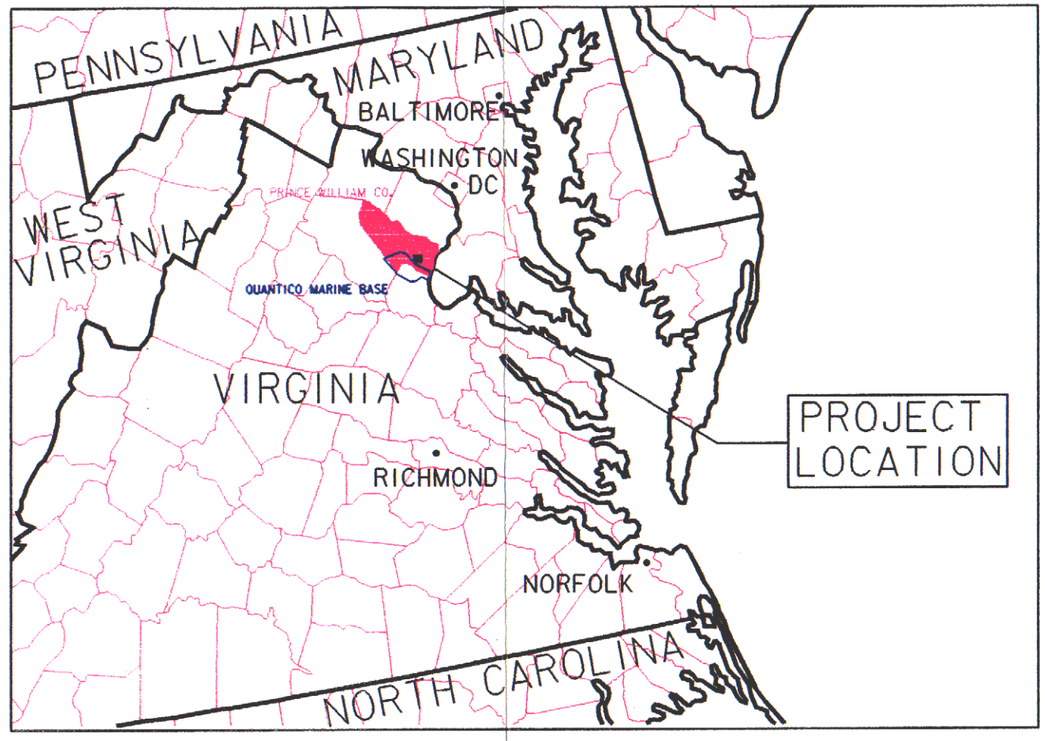
County:	Prince William
Area:	348 sq.mi.
POP:	243,559
PD:	699.9 persons per sq.mi.

Population and area are based on the U.S. Department of Commerce, Bureau of the Census, 1990 statistics, and telephone interviews.

3.4.3 Business and Industry Profile

A review of both telephone interviews and County Business Patterns (1990) assisted in developing a business profile of the area. The County of Prince William is diversified. The





LEGEND

- Population Center
- State Route
- Geo Feature
- Town, Small City
- Park
- Interstate, Turnpike
- US Highway
- County Boundary
- Major Street/Road
- State Route
- Interstate Highway
- US Highway
- Open Water
- SITE AREA
- QUANTICO MARINE BASE

2 Miles

5 KM

N

NOT TO SCALE

FIGURE 3.1

CHOPAWAMSIC TROOP TRAINING SITE
PRINCE WILLIAM COUNTY, VIRGINIA
DERP FUDS # C03VA019402
VICINITY MAP

PROJ. DATE: MAR. 1995	DATE OF MAP: 1993
23-MAR-1995 15:39	/N/OEW95AB/G4/MAP/CHOPVIC.DGN, H20,CHOPVIC.CIT

LEGEND:

RESERVATION BOUNDARY

**NOTE: U.S. ROUTE 95 HAS BEEN ADDED TO SHOW ITS APPROXIMATE PRESENT DAY LOCATION.

N

NOT TO SCALE

FIGURE 3.2

CHOPAWAMSIC TROOP TRAINING SITE
PRINCE WILLIAM COUNTY, VA
DERP FUDS # C03VA019402
SITE MAP

PROJ. DATE: MAR 1995	DATE OF MAP: 1943
23-MAR-1995 13:16	N/OEW95AB/G4/MAP/CHOPAMAP.DGN - CHOPAMAP.CIT

largest employers are: Atlantic Research Corporation, AT&T, IBM Corp., Prince William County Schools, and Quantico Marine Corp Base. The community supports retail, service, and light industries.

3.4.4 Type of Housing

Housing in Prince William County is composed of both single and multi-family homes.

3.4.5 New Development in the Area

Development in the Prince William County area includes residential dwellings, industrial, and commercial development.

3.4.6 Typical Cross-Section of Population

The ancestry in Prince William County is diverse. Approximately 83.0% of the population is white, 12.0% Black, 4.5% Hispanic, 0.5% other races. The percent of those under the age of 18 is 31.0%, over 65 years is 3.0%. The median age is 29. There are approximately 84,100 housing units with a median value of $138,500. The work force, based on the number of establishments in Prince William County is broken down into the following: manufacturing, 4.0%; agriculture, 1.1%; services, 30.0%; trade and finance, 37.4%; other,27.5%.

4.0 Physical Characteristics of the Site

4.1 Geology\Physiography

The Chopawamsic Training Site is located in the Piedmont Upland section of the Piedmont physiographic province. The topography of the Piedmont physiographic province consists of low well-rounded hills and long, northeast-trending valleys and ridges. The surfaces of many ridge tops and interstream divides are relatively flat. Recent erosion by streams has dissected the Piedmont and created a local topographic relief of 100 to 200 ft between drainage divides and stream bottoms. Land surface in the Piedmont ranges from 300 to 600 ft above sea level along the eastern border near the Fall Line to more than 1500 ft near the escarpment of the Blue Ridge. The Upland section is considered representative of the Harrisburg peneplain. Erosional modification of this erosion surface has been on the whole rather moderate. Dissection is least at the western margin and increases along streams toward the Fall Line. Numerous monadnocks are present along the western margin of the section (Thornbury 1965).

4.2 Soils

The soils of the Chopawamsic site are composed mainly of silty sandy clay that becomes gradually more clayey and gravelly in the substratum. Slopes in this area range from 0% to 50%. The soils are all deep (over 60 inches) except for a few areas of severe slope where the soil is only moderately deep (48 inches). Generally, the surface layer is thin, dark brown, and composed of silty sandy clay. The subsoil is brownish yellow or strong brown, silty sandy clay. Gravel or sand is present in the lower part of the subsoil. The substratum is composed of multicolored sand or reddish yellowish and brownish gravelly sandy silty clay.

The permeability of the soil is for the most part is moderate, as well as the available water capacity. The surface runoff is dependent on the slope and in some areas is very rapid. The seasonal high water table is at the most within 12 inches of the surface and usually levels out between 36 and 60 inches below the surface (Elder 1989).

4.3 Hydrology

4.3.1 Surface Water

The Chopawamsic Troop Training Site is located southwest of Washington, DC near the Quantico Marine Corps Base in Prince William County, Virginia. It is drained primarily by Quantico Creek and Chopawamsic Creek and several of their small tributaries but insufficient gage readings are available.

4.3.2 Groundwater

The Piedmont physiographic province is underlain by igneous, metamorphic, and sedimentary bedrock ranging in age from Precambrian to Mesozoic. Bedrock includes massive granites and gneisses, foliated phyllites and schists, and consolidated sandstones. Metamorphic rocks predominate the crystalline rock regimes. In most places, the consolidated rocks are overlain by regolith. Porosity of the regolith is about 35 to 55% near land surface but decreases with depth as the degree of weathering decreases. Porosity of the bedrock is only .01 to 2%. Because of the relatively high porosity and permeability of the regolith, recharge from precipitation is stored in the regolith and later reaches the underlying rocks through fractures. The abundance of connected fractures within the bedrock directly affects the yield of wells in the Piedmont physiographic province. Because fractures act as conduits for the flow of ground-water, well yields are greatest where wells intersect large or numerous fractures. Because the number and size of fractures decreases with depth in the Piedmont rocks, most wells within the Piedmont are less than 800 ft deep. Wells in crystalline rocks of the Piedmont commonly produce 5 to 35 gal/min and some yield as much as 1800 gal/min (Swain and others 1991).

4.4 Weather

This site near Washington, DC lies at the western edge of the mid Atlantic Coastal Plain, about 50 miles east of the Blue Ridge Mountains and 35 miles west of Chesapeake Bay. The area is characterized by warm and humid summers, and winters are cold, but not severe. Periods of pleasant weather often occur in the spring and fall. The summertime temperature is in the upper 80s and the winter is in the upper 20s. The average date of the last freezing temperature in the spring is April 1 and the average date for the first freezing temperature in the fall is November 10. Precipitation is rather uniformly distributed throughout the year. Thunderstorms can occur at any time of the year but are most frequent during the late spring and summer. The storms are most often accompanied by downpours and gusty winds but severe weather such as tornadoes and hailstorms are possible but infrequent. Tropical storms can also hit this area with heavy rain, high winds, and flooding, but extensive damage is also rare. The average winter snowfall is about 18 inches per year.

The prevailing wind direction is from the south, but occasional severe winter storms will produce strong northwesterly winds.

Relative humidity is close to 75 percent during the early hours of the day and drops to around 50 percent late in the afternoon.

In Washington, DC the sun shines for about 50 percent of the daylight hours in winter, and for more than 60 percent in summer. Skies are clear more than 25 percent of the time, partly cloudy about 30 per cent, and cloudy about 45 percent.

Climatological data for the area are summarized in TABLE 4-1. Data were collected at the National Weather Service meteorological station at the Washington, DC National Airport. The site is located about 25 miles southwest of the National Airport.

CLIMATOLOGICAL DATA FOR WASHINGTON, DC NATIONAL AIRPORT
TABLE 4-1

Month	Temperature		Precipitation	Wind	
	Average Minimum (°F)	Average Maximum (°F)	Average (Inches)	Average Speed Miles/Hour	Average Direction
January	26.8	42.3	2.72	10.0	NW
February	29.1	45.9	2.71	10.4	S
March	37.7	56.5	3.17	10.9	NW
April	46.4	66.7	2.71	10.5	S
May	56.6	76.2	3.66	9.3	S
June	66.5	84.7	3.38	8.9	S
July	71.4	88.5	3.80	8.3	S
August	70.0	86.9	3.91	8.1	S
September	62.5	80.1	3.31	8.4	S
October	50.3	69.1	3.02	8.7	SSW
November	41.1	58.3	3.12	9.3	S
December	31.7	47.0	3.12	9.6	NW
Average	49.2	66.9	38.63	9.4	S

4.5 Ecology

The information on the endangered and threatened species for this site has been provided by the U.S. Fish and Wildlife Service (USFWS) and the Virginia Department of Conservation and Recreation, Division of Natural Heritage (VDC-NH).

The USFWS indicated that the following Federally protected species may be found in Prince William County, Virginia: Bald eagle (Haliaeetus leucocephalus), endangered; Henslow's sparrow (Ammodramus henslowii), candidate; brook floater (Alasmidonta varicosa), candidate; yellow lance (Elliptio lanceolata), candidate; regal fritillary (Speyeria idalia), candidate; and small whorled pogonia (Isotria medoloides), threatened.

The VDC-NH reported that the State endangered small whorled pogonia occur in the vicinity of the Chopawamsic Troop Training Site. The following State threatened and endangered species were reported to occur in Prince William County: Bald eagle, endangered; brook floater, endangered; and regal fritillary, candidate.

No additional information on the occurrence of rare or endangered species or natural communities is known at this time. This does not mean that other state or federally-listed species may not be present within the areas of interest. An on site inspection by appropriate state and federal personnel may be necessary to verify the presence, absence, or location of listed species, or natural communities if remedial action is recommended as part of the final ASR.

5.0 Real Estate

5.1 Present Ownership

The Findings and Determinations of Eligibility (FDEs), cited in Paragraph 2.0, indicates that the permitted use lands of the former Chopawamsic Troop Training Site and those acquired through condemnation proceedings were placed in the custody of the NPS by 1948. The site remains under NPS control.

5.2 Confirmed DOD Ownership

Based on data contained in the FDE, the Army acquired permit use of 9,870 acres from the Department of Interior and 1,141.23 acres in fee, by condemnation in 1942.

5.3 Historically Significant Past Ownership

There is nothing in the records to indicate that there were any historically significant past ownerships, other than DOD's, with respect to possible OEW.

6.0 OEW/CWM Site Analysis

6.1 Historical Summary of OEW/CWM Activities

In 1933, the Resettlement Administration, under the authority of the National Industrial Recovery Act, acquired 17,000 acres of depleted farmland in Prince William County, Virginia, and established the Chopawamsic Recreation Demonstration Area (RDA). In 1936, the area was transferred by Executive Order to the Department of the Interior for administration. In 1940 congress directed that the area be administered as a part of the National Capital Park system. A major stated purpose of the park was to provide recreational opportunities for residents of and visitors to the Washington metropolitan area (Jones 1981).

In 1934, the Civilian Conservation Corps (CCC) began the construction of the cabin camps, roads, lakes, trails, and utility systems. Some local labor was also used. The first camp was completed and in operation by 1935. By 1940, when the area was officially transferred to the national park system, five cabin camps had been completed, each accommodating 150 campers. Other facilities included three CCC camps, a temporary office, a makeshift maintenance area, and five lakes (National Park Service 1992).

With the beginning of World War II, the defense needs of the nation eventually superseded the recreational needs of the public. As early as 1938, military maneuvers had been conducted in the park by forces from Quantico Marine Base and Fort Belvoir. By 1942 the practice of military maneuvers had become commonplace. During World War II, parts of the park were utilized for military training purposes, and 4,862 acres of land south of Virginia State Route 619 are still under special use permit to the Department of the Navy for Marine training purposes.

In 1942, a special use permit was also granted allowing exclusive use of all five cabin camps in the park by the War Department (Strickland 1986). From 1942 to 1945, Chopawamsic RDA was closed and was used by the U.S. Army's Office of Strategic Services (OSS), the forerunner of the CIA. Chopawamsic RDA became a school for the training of agents in the art of espionage (Christner 1995).

The OSS staff ran both basic and advanced training at the same time in different sections of Chopawamsic, known as Areas A and C. Cabin units in each area were designated numerically. Paramilitary training included the use of pistols, revolvers, carbines, rifles, sub-machine guns, mortar guns, mortars, rockets, grenades, military demolition and explosives. An assortment of OSS sabotage and "booby-trap" devices (incendiary, demolition and contact firing types) were also probably used (Brunner 1994). Besides paramilitary training, Area C was also used for cryptic training (D'Anne Evans 1989, Strickland 1986).

"Live fire" ranges were established for each type of weapon system. Danger areas created included 10 target ranges and 3 demolition areas. Demolition areas covered 4 acres on old

Route 643, 1 acre on Route 620 (North of Route 626 intersection) and 20 acres on Route 626 and Route 619. Magazines and other storage facilities for munitions were also constructed at Chopawamsic RDA.

Shortly after World War II, in 1946, the special use permit for Chopawamsic RDA by the War Department was terminated. A restoration survey had been conducted by the U.S. Army Corps of Engineers listing improvements to the property by the War Department and/or damages resulting from War Department occupancy (United States Engineer Office 1945). The list includes the following designated areas and usage:

> Area A---storage magazine surrounded by stockade fence, a 200-yard rifle range and three demolition areas (1 acre, 4 acres and 20 acres).
>
> Area/Camp A-2----pistol range building (40 ft. by 60 ft.).
>
> Tract Numbered 229----two magazines (24 ft. by 42 ft.)
>
> Property believed to be National Park Service land, but may lie partly on Tracts Numbered 224 and 230----200-yard rifle range.
>
> Tract Numbered 256----one acre demolition area.
>
> Tract Numbered 208----four acre demolition area (effects may have extended to Tract Numbered 213 owned by War Department).
>
> Tract Numbered 201----twenty acre demolition area.
>
> Camp A-4----target rifle range (1500 cubic yards grading and wood shelters).
>
> Camp C-4----6 target rifle range (100 cubic yards excavation and shelters).
>
> Camp C-4----8 target pistol range (1,000 cubic yards excavation and shelters).

Included in the restoration survey document is a letter from Headquarters, Det # 6, 9800th TSU-CE, Bomb and Shell Disposal Team, Chopawamsic, VA, dated 13 January 1946, Subject: Clearance of Range Land in Chopawamsic Park, other areas are vaguely listed for the Chopawamsic RDA. Reference is made to a map, which was not attached to the report. These areas are listed as follows:

> Mortar and Rocket Range (40.5 - 73.8), approximately 8 acres (letter reference), 20 acres (map indication).
>
> Mortar Range (44.6 - 72.0), approximately 3 acres (letter reference), 1 acre (map indication).

Mortar Range (44.7 - 74.6), approximately 1 acre, 4 acres (map indication).

3 Abandoned Houses----practice booby-trapping

Magazine Area

Hand-grenade Court

Further investigation revealed that these ranges/explosive areas concide with the previously listed areas

Remediation and restoration measures were taken in 1946 and 1947. The name of Chopawamsic RDA was then changed to Prince William Forest Park.

At the end of World War II, Chopawamsic RDA, now Prince William Forest Park, was supposedly cleared of unexploded ordnance. However, as recently as 1993, the 57th EOD at Ft. Belvoir, VA, reported an incident involving a bazooka round. Earlier in 1985, a mortar shell was found embedded in the roof of a building and removed.

Besides the discovery of ordnance, an ongoing administrative problem for Prince William Forest Park since World War II has been the issue of 4,862 acres of land on loan to the Quantico Marine Corps Base. Both the Marine Corps and the National Park Service believe they have valid claim to the 4,862 acres.

6.2 Records Review

National Archives and Records Administration
Suitland Branch
4205 Suitland Road
Suitland, MD 20409

Post war correspondence on restoration of the site was obtained from Accession Number 77-A52-259, Box 18.

National Archives
8th and Pennsylvania
Washington, D.C. 20408

Information obtained from textual sources: "OSS Weapons" by John W. Brunner, Ph.D., and "History of the Schools & Training Branch, Office of Strategic Services" edited by William L. Cassidy.

Archives II
8601 Adelphi Road
College Park, MD 20740-6001

Historical Maps (including post war time period) of Chopawamsic Troop Training Area were retrieved from the Cartographic Division.

Chemical and Biological Defense Agency Historical Office
AMSCB-CIH
Aberdeen Proving Ground
Edgewood, MD 21010

Files reviewed did not contain pertinent information.

National Personnel Records Center
9700 Page Blvd
St. Louis, MO 63132

All files under accession numbers reviewed yielded no pertinent information.

U.S. Army Chemical School
Fisher Library, Sibert Hall
Ft. McClellan, AL 36205-5020

Files searched by librarian revealed no pertinent information.

National Archives-Mid Atlantic Region
9th & Market Streets
Philadelphia, PA 19107

Information obtained from RG 79 (Records of the National Park Service) pertained to the land acquisition of the site (including maps) and some local correspondence. Information obtained from RG 270 (Records of the War Assets Administration) pertained to real estate information of the site, including a list of improvements to the property by the War Department and/or damages resulting from War Department occupancy with estimated cost of restoration.

Federal Records Center
5000 Wissahickon Ave
Philadelphia, PA 19144

Files under accession numbers did not reveal any pertinent information.

Library of Virginia
11th Street at Capitol Square
Richmond, VA 23219-3491

A newspaper clipping on the site was obtained from the Richmond Times-Dispatch.

Archives
Marine Corps Research Center
Quantico Corps University
Marine Corps Combat Development Command
2040 Broadway Street
Quantico, VA 22134-5107

Materials obtained included 1937 revised map of the area encompassing the Chopawamsic Troop Training Site depicting impact areas, training areas and ranges. Historical information on the history of the Quantico Marine Corps Base was also found.

Soil Conservation Service
9263 Corporate Circle
Manassas, VA 22110

Copy of Soil Survey of Prince William County, Virginia (including maps) was obtained.

Archives
Judicial Circuit Court
Prince William County Court House
9311 Lee Avenue
Manassas, VA 22110

Aerials were reviewed. No copies were obtained.

Office of Mapping & Information Resources
Prince William County
4379 Ridgewood Center Drive, Suite 201
Prince William, VA 22192-5308

Maps and aerials were reviewed. No copies were obtained.

Office of Planning and Zoning
Prince William County
1 County Complex Court
Prince William, VA 22192-9201

Materials obtained included newspaper clippings; "Draft General Management Plan, Environmental Assessment, Prince William Forest Park, VA"; extracts from "Prince William

County: A Pictorial History" by D'Anne Evans and "Prince William: A Past to Preserve" by the Prince William County Historical Commission, "The Curtis Collection: A Personal View of Prince William County History"; and an page from a survey file by the Virginia Historical Landmarks Commission.

Bull Run Regional Library
8051 Ashton Avenue
Manassas, VA 22110

Information was obtained from pertinent pages of the publication entitled "Prince William Forest Park: An Administrative History" by Susan Cary Strickland and "the Hinterland: An Overview of the Prehistory and History of Prince William Forest Park, Virginia" by the National Park Service.

Cultural Resource Management Interpretation & Visitor Center
Prince William Forest Park
P.O. Box 209
Triangle, VA 22172

An historical map of the site and a copy of the publication entitled "Prince William Forest Park: An Administrative History" by Susan Cary Strickland was obtained.

6.3 Interpretation of Aerial Photography

6.3.1 Interpretation of Aerial Photography

Photographic analysis and land use interpretation were performed using the following photographic sources:

Photo Date	Approx. Scale	Source	Frame ID #
30 Mar 1943	1"=1,750	NATIONAL ARCHIVES	06 thru 12 51 thru 55 143 thru 147
12 Mar 1950	1"=2,000'	NATIONAL ARCHIVES	249 thru 254 266 thru 270
08 Dec 1953	1"=1,667'	ASCS	82 thru 87 127 thru 132
09 Apr 1954	1"=1,667'	ASCS	196 thru 200

Photo Date	Approx. Scale	Source	Frame ID #
09 Jun 1962	1"=1,667'	ASCS	79 thru 85 146 thru 151
10 Jul 1962	1"=1,667'	ASCS	35 thru 41
29 Mar 1963	1"=2,000'	USGS	86 thru 90 98 thru 102
30 Jun 1969	1"=1,667'	ASCS	32 thru 34 36 thru 40 48 thru 51
02 Dec 1971	1"=2,000'	USGS	19 thru 24 33 thru 38 45 thru 50

Two USGS topographic quadrangles were used to reference the photography, they are as follows:

Joplin (photorevised 1971)
Quantico (photorevised 1983)

Photography prior to 1943 was not available for interpretation. The photography from 1943, 1950, and 1954 does not reveal any land disturbances in any of the suspected site areas. Buildings were located in the site areas. These findings appear to be consistant considering the period of use.

1962 photography was analyzed, and buildings in the site areas are still evident in the photography. The rest of the photography was scanned, and no other areas of interest were evident.

Photography from 1963, 1969 and 1971 did not reveal anything different from the 1962 photos with respect to possible OEW indications.

6.3.2 Map Analysis

Map analysis was performed using the following 7.5' USGS quadrangles:

Joplin (photorevised 1971)
Quantico (photorevised 1983)

Both quadrangles contain both planimetric and topographic features. The terrain is fairly rugged and is covered with dense woods. There are many streams both perennial and intermittent in the area. Planimetrically there are many hard and loose surface roads. There are many areas of human habitation. The site area lies within the boundaries of Prince William Forest Park. There are mainly dense woods and a few small roads within this area.

6.4 Interviews

Interviews were conducted by telephone and in person, both prior to and during the site inspection. The primary purpose of these interviews was to make initial contact with individuals knowledgeable of the site and to coordinate follow-up visits during the site inspection phase of this ASR's preparation. A list of persons interviewed is included at Appendix E. Any pertinent information derived from these discussions is covered within the context of this report.

6.5 Site Inspection

The subject site inspection was performed by the following St. Louis District personnel:

Dennis W. Gilmore	Project Manager
Gregg Kocher	Safety Specialist
M. Kevin McCaffrey	QASAS

The site, which is currently a national forest, is tree covered and decades of accumulated organic matter covers the ground.

The team, accompanied by Mike Shafer, National Park Service Ranger, inspected various ranges within the former training site. The former facility included two small arms ranges, four demolition ranges, a mortar range, and a multi-use assault range (Figure 7.1).

Of the eight areas, OEW was observed in two. At the five target, 50 yard pistol range several expended .45 caliber rounds were found embedded in each of the target posts. This range was also used for carbine and sub-machine gun firing.

The multi-use assault range is the site of a 1993 recovery of a 2.36" rocket. During the site inspection we discovered two concrete targets (one with a 20mm gun barrel). Additionally, we found a portion of a 2.36". This site is located in what is believed to be a cemetery. No indications of OEW was found in either of the other areas inspected.

Based on interviews and our research in the local area, it is concluded that OEW contamination of the site exists. However, because of the limited use and nature of the training conducted, it is believed that the scale of contamination would be relatively small. This is based on the number of personnel trained and the short period during which the site operated.

7.0 Evaluation of Ordnance Contamination

Based on the extensive archive searches performed, the interviews with National Park Service personnel, and the results of the site investigation, there exists the probability of OEW contamination at the site based on observed OEW and previous recoveries of ordnance. Due to the nature and small scale of the training, the OEW contamination is thought to be localized and in limited quantities.

As noted in Section 6.5 - Site Inspection, of the eight areas identified as potentially contaminated, OEW was observed in two. At the 50 yard small arms range, several expended .45 cal rounds were found embedded in each of the target posts. This range was also used for carbine and sub-machine gun firing.

The multi-use assault range is the site of a 1993 2.36" rocket recovery. This item was found by a Park Ranger while cleaning a family homestead burial plot. No cultural significance related to the cemetery was found, though the Ranger suspects it dates to the turn of the century.

During the site inspection, two trapezoidal concrete targets (one with a 20mm gun barrel) were discovered. The continued survey of the site revealed a portion of a 2.36" rocket body. This site is located in what is reported above to be a cemetery.

No indications or observations of OEW was found in either of the other areas inspected. The ability to visually located items was severely hamper by the natural environment. The site is tree covered and decades of accumulated organic matter covers the ground.

The site inspection confirmed the contamination of the site with OEW. No OEW of a hazardous nature was observed during the site inspection. However, there exists a good probability that of additional OEW. Therefore, a RAC score of 3 has been derived, indicating that further action be taken.